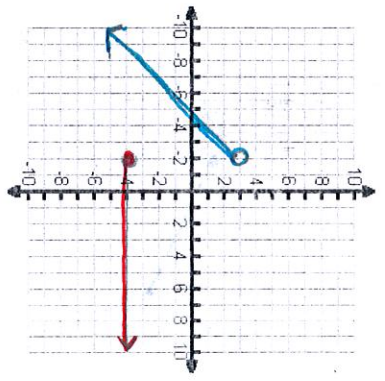
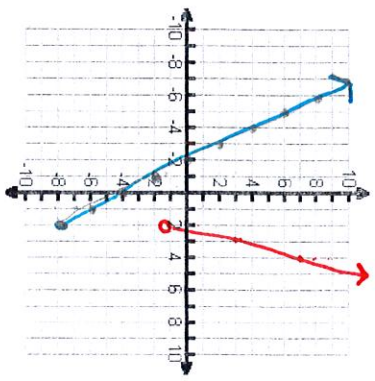


Part I. Graph each of the following piecewise functions. Identify any points of discontinuity.

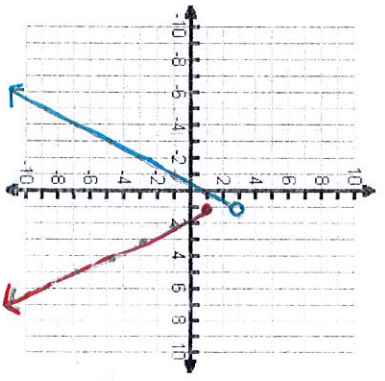
1.  $f(x) = \begin{cases} x+5 & \text{if } x < -2 \\ -4 & \text{if } x \geq -2 \end{cases}$



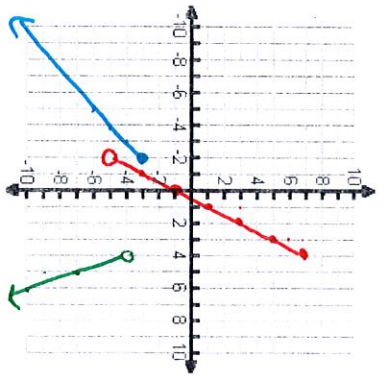
3.  $f(x) = \begin{cases} -2x-4 & \text{if } x \leq 2 \\ 4x-9 & \text{if } x > 2 \end{cases}$



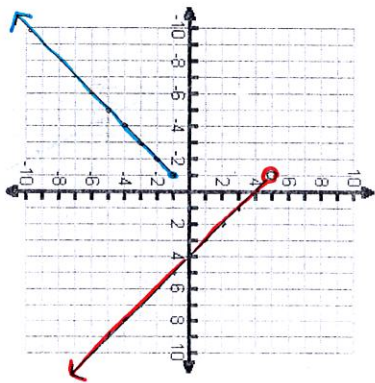
2.  $f(x) = \begin{cases} 2x+1 & \text{if } x < 1 \\ -2x+3 & \text{if } x \geq 1 \end{cases}$



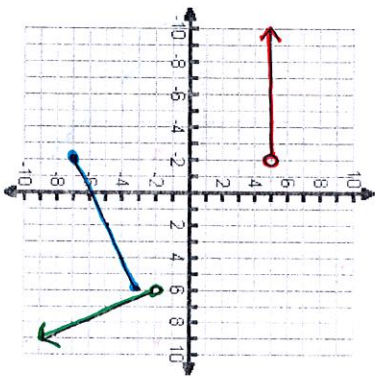
4.  $f(x) = \begin{cases} x-1 & \text{if } x \leq -2 \\ 2x-1 & \text{if } -2 < x \leq 4 \\ -3x+8 & \text{if } x > 4 \end{cases}$



$$5. f(x) = \begin{cases} x & \text{if } x \leq -1 \\ -2x+4 & \text{if } -1 < x < 6 \\ -2x+10 & \text{if } x \geq 6 \end{cases}$$



$$6. f(x) = \begin{cases} 5 & \text{if } x < -2 \\ \frac{1}{2}x - 6 & \text{if } -2 \leq x \leq 6 \\ -2x + 10 & \text{if } x > 6 \end{cases}$$



Part II. Evaluate the piecewise function for the given values of x.

$$1. f(x) = \begin{cases} x+5 & \text{if } x < -2 \\ -4 & \text{if } -2 \leq x < 6 \\ -2x+10 & \text{if } x \geq 6 \end{cases}$$

$$f(3) = -4 \quad f(-4) = 1$$

$$f(-2) = -4$$

$$2. f(x) = \begin{cases} 2x+1 & \text{if } x < 1 \\ -2x+3 & \text{if } 1 \leq x < 6 \\ -2x+10 & \text{if } x \geq 6 \end{cases}$$

$$f(-2) = -3 \quad f(6) = -9$$

$$f(1) = 1$$

$$3. f(x) = \begin{cases} -2x-4 & \text{if } x \leq 2 \\ 4x-9 & \text{if } 2 < x < 6 \\ -2x+10 & \text{if } x \geq 6 \end{cases}$$

$$f(-4) = 4 \quad f(8) = 23$$

$$f(2) = -12$$

$$4. f(x) = \begin{cases} x-1 & \text{if } x \leq -2 \\ 2x-1 & \text{if } -2 < x \leq 4 \\ -3x+8 & \text{if } x > 4 \end{cases}$$

$$f(-1) = -3 \quad f(-4) = -5$$

$$f(5) = -7$$

$$5. f(x) = \begin{cases} x & \text{if } x \leq -1 \\ -x+4 & \text{if } -1 < x < 6 \\ -2x+10 & \text{if } x \geq 6 \end{cases}$$

$$f(-4) = -4 \quad f(0) = 4$$

$$f(3) = 1$$

$$6. f(x) = \begin{cases} 5 & \text{if } x < -2 \\ \frac{1}{2}x - 6 & \text{if } -2 \leq x \leq 6 \\ -2x+10 & \text{if } x > 6 \end{cases}$$

$$f(-4) = 5 \quad f(8) = -6$$

$$f(-2) = -7$$